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tecans were looking for land buyers. In the summer of 1947, I was approached by three individuals who wanted to sell me a house plot. However, the high price paid by the Mexican banker and a few other early comers gave Tepoztecs an exaggerated notion of the value of their land. House sites which were worth about 100 to 200 pesos in 1927 now would not be sold for less than 10,000 pesos. This has made a few people wealthy, especially those who were fortunate enough to have house sites fronting the new road. 423 432 178 [435]

THE LAND PROBLEM

The land problem in Tepoztlán is not a recent phenomenon. It was at least as severe in the twenties, before the *ejido* grants, and it was certainly more acute before the Revolution. Twenty years ago, the 158 families who now have *ejidos* were landless *peones*. Thus, the *ejido* program in Tepoztlán has had at least two beneficial effects. It has reduced the number of landless families, and it has helped some families, who had insufficient land, to increase their holdings. But the *ejido* program has by no means solved the land problem, for 384 families still remain landless and have little prospect of becoming landowners. Although the *ejido* program brought new and more modern agricultural techniques, there is still not a single tractor in Tepoztlán. 423 556 [409]•

It is apparent that our findings on land-ownership in Tepoztlán differ from those in Redfield's earlier study. Redfield did not mention the existence of a land problem or land shortage in Tepoztlán. Although Redfield gives no clear-cut statement on the matter of land-ownership, and treats the entire subject rather incidentally, there is an implication that each family in Tepoztlán owned its own land. Redfield writes, "Most families have at least a small milpa in which the men are active during the seasons of sowing and harvesting."¹ We have shown that in 1944, 64 per cent of the families owned no private land, and there is no reason to believe that the land situation was any better in 1926. Redfield's use of the term "milpa" is perhaps responsible for what appears to be a sharp difference in our findings. He did not distinguish between a privately owned milpa and a milpa of communally owned land. A Tepoztecán speaks of "my milpa" in referring to rented land, communal land, or private land. Unless the investigator probed further, he might well get the impression that all Tepoztecs were landowners. 114 423

Redfield conveyed this impression in another connection. In discussing private lands he wrote,

Characteristically each *sitio* has an appendant milpa which may be located as much as a mile away from the *sitio*: but the two are usually taxed and inherited together. These tracts are not infrequently sold, but most of them have been in the same family for many generations.*

This quotation raises a number of questions. First, Tepoztecs distinguish be-

¹ Redfield, *Tepoztlán*, p. 145.

* *Ibid.*, p. 61.

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241 erally speaking, the tools and techniques used in *tlacolol* are still known by their Náhuatl names, whereas in plow culture Spanish names prevail. Still another difference results from the location of the lands involved. (See Fig. 22.) With few exceptions the privately owned land used for plow culture is much closer to the village than the *tlacolol* land. *Tlacoleros* generally rise at 4:00 A.M., travel about two to three hours to reach their fields, and return home a few hours later than plow culture farmers. The building of the road directly through the privately owned lands has made this contrast sharper. It is not uncommon for some Tepoztecan farmers to take the bus to their milpa. *Tlacoleros*, however, always walk or go by burro. (See Fig. 23.)

241 PLOW CULTURE

407 The basic tools of production in plow culture are the ax, plow, machete, and iron hoe. Two types of plows are used: the *arado criollo* (wooden plow) and the *arado polco* (steel plow). The wooden plow (Fig. 24) was introduced by the Spaniards shortly after the Conquest; the first steel plow (Fig. 25) came into the village toward the latter part of the nineteenth century after the railroad had been built through the upper portion of the municipio. Before the Revolution of 1910-20 the steel plow was used only by a few families, and, as late as 1926-27, Redfield reported only a few steel plows.⁴ However, by the early thirties plows became more widely used, and in 1943 most farmers used steel plows in addition to wooden plows, each being used for different operations. In 1943, approximately 213 families owned their plows. This number represented only 48 per cent of the families in the village who owned land. In other words, 52 per cent of the landowners lacked one of the basic tools for plow culture.

407 The wooden plows are made locally by several men who specialize in this work, and the cost of the wooden plow is comparatively inexpensive. However, the 435 prices of both the steel and wooden plow have increased in recent years, so that 322 now considerable capital is needed to purchase a steel plow. (See Table 27.)

TABLE 27. Cost of Plows, in Pesos.

Year	Wooden Plow	Steel Plow
1926	3.00	—
1935	5.50	14.00
1940	7.50	18.00
1942	—	30.00
1944	12.00	40.00

492 The precise date of the introduction of oxen to Tepoztlán is not known, but they 177 have been used in the village since long before the Revolution. (See Fig. 26.) Most

⁴ "The ground is prepared with a wooden plow. For new-broken or very strong earth there are a few steel plowshares." Redfield, *Tepoztlán*, p. 122.

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of the oxen were killed during the Revolution; and in the early twenties, mules and donkeys were used and are still used by some of the poorer families. Tepoztecos buy most of their oxen in the nearby state of Guerrero and in the southern part of the state of Morelos. By 1944 there were 179 oxen teams in the village. (See Table 28.)

It can be seen from this table that only 57 per cent of the landowners owned oxen. In general, those barrios which have a higher percentage of larger landholdings show a higher number of families owning plows and oxen. In Tepoztlán it is considered uneconomical for a farmer with only a few hectares to own oxen. Furthermore, the high cost of oxen makes it impossible for most Tepoztecos to own any, and teams may be rented by the day or the season. (See Table 29.)

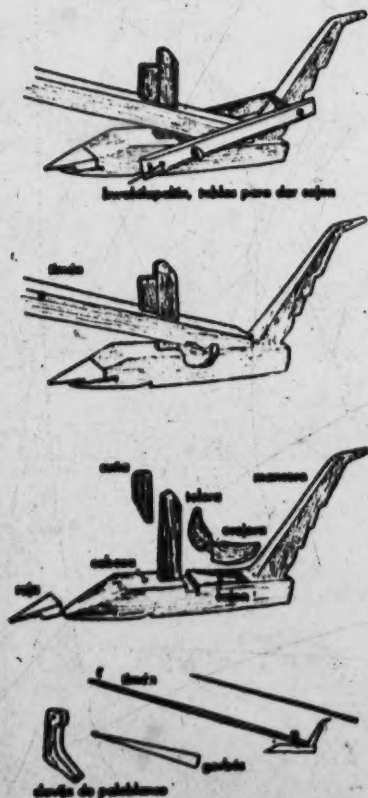


Fig. 24. The wooden plow.



Fig. 25. The steel plow.

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TABLE 28. Distribution of Ownership of Plows, Oxen, and Land, 1944.

Barrio	Families Owning Plows	Families Owning Oxen	Families Owning Land
San Miguel	48	44	83
Santo Domingo	70	50	61
La Santísima	36	32	62
Santa Cruz (large)	14	14	44
Los Reyes	23	21	30
San Sebastián	8	6	11
Santa Cruz (small)	8	6	10
San Pedro	6	6	10
Tepostlán	213	179	311

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TABLE 29. Cost of Oxen, Rental of Oxen, and Wages.

Year	Cost of Oxen ^a	Rental of Oxen per Day (With Driver)	Rental of Oxen per Three Months		Wages of Peón per Day
			In Corn ^b	In Pesos	
1926-30	60.00	1.50	6	40.00	50
1936	70.00	2.50	8	75.00	1 00
1940	100.00	3.25	8	125.00	1 25
1942	125.00	4.00	7	150.00	1 50
1943	200.00	5.00	7	150.00	1 90 2 00
1944 (April)	400.00	6.00	7	170.00	2 50 3 00
1944 (July)	400.00	7.50 10 00	7	200.00	3 00 3 50

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^a Cost in Guercero.
^b By 100 *castrillos*.

WORK CYCLE AND PRODUCTION TECHNIQUES

The work cycle of plow culture in Tepostlán is in four stages: preparation of the land, planting, cultivation, and harvest.

Preparation of Land: In discussing the preparation of the land, we must distinguish between breaking new land, or land that has been idle for a number of years, and preparing land that was under cultivation the year before. In the former case the process is referred to as the *barbecho* (breaking of new land); in the latter as *los tres arados* (the three plowings). The system of plowing used in each case differs considerably. Some Tepoztecos begin their first *barbecho* in the dry or slack season, generally in March. However, at this time the earth is parched and hard, and plowing is difficult and slow. For this reason, farmers prefer to break new land during the rainy season, generally in August, in preparation for the following year. If the weeds are tall and strong they are cut with a machete, piled up to dry, and are burned.⁸ It takes a man about three days to clear a heavily

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⁸ The most stubborn weeds are known as *maute chino*. These have deep roots, and if the field is heavily weeded it is necessary to plow in January and again in March. The older men say that this weed came in after the Revolution.

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243 appearance of the new moon brings a better harvest. The rows of corn are 80 or
 [821] 90 cm. apart, depending upon the fertility of the field. Yokes are therefore two
 [492] standard sizes.
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Some farmers mix their corn seed with beans: *frijol chino*, *pepita*, and *frijol colorado*. When this is done, no special number of seed is used. After the first cultivation, *frijol negro* or *bayo* may be planted between the corn hills.

[407] In planting a field that has been prepared by the *dos arados* rather than by the *barbecho*, the plow is directed right through the middle of the old corn beds, and this is known as the *tercer arado*, completing the three plowings involved in the preparation and planting. Both in the newly broken ground and in the land that has been in cultivation the preceding year, the *arado criollo* (wooden plow) is used in planting, and a piece of wood is inserted which acts as a double mouldboard and throws the earth to both sides. The amount of corn that is planted per day depends upon the type of corn and the speed of the oxen and driver. On the average, two men working with a team of oxen can plant eight to ten *cuartillos* of *maíz ancho* per day, and about five to six *cuartillos* of *maíz pepitillo*.

First Cultivation: Two or three cultivations are generally given to cornfields; these cultivations are known as *el primer mano* or *el primer beneficio*, *el segundo mano*, and *el tercer mano*.

The first cultivation of the corn is generally done twenty days after the planting when the corn shoots are still very small.¹⁰ Again the steel plow and the short yoke is used, and the oxen walk between the furrows on either side of the corn bed. The plow is pulled to the right of the row of young corn, so that the earth is turned away from the corn. The driver walks to the left of the row and holds the plow with his right hand. Two *peones* are used in addition to the driver. The *peones* follow the plow, staying on the left side of the row of corn; they bend over the corn and with their hands they carefully push the earth around the young plants. The two *peones* work simultaneously about twenty feet apart and by-pass each other when they reach a section that has already been cultivated. The first cultivation of a plot of ten to twelve *cuartillos*, using two *peones*, takes on an average of two days.

[825] Tepoztecan^s have an ingenious way of fighting ants which threaten the young
 [824] corn. When the young shoots are about to appear, they take the leaves of a tree called *yamatl* (of the *amate* family), chop up the leaves, and sprinkle them over the rows of corn, and especially on ant nests. The ants prefer this leaf to corn, and Tepoztecan^s claim it makes them thin and eventually kills them. The leaf contains a white, milky substance so strong that it will peel the skin off a man's hand. Another tree whose leaves are used for the same purpose is *yoyohtli*.

Second Cultivation: The second cultivation begins about twenty days after the first cultivation is completed, generally in the last week of July. The process is very

¹⁰ In fields which have gathered much water, Tepoztecan^s may plow in the furrows about eight days after planting, to spread the water. Such plowing is called *robread*.

243 much the same except that the plowing is deeper, and the steel plow is pulled to the left of the row of corn, and the earth is turned to the right toward the plant. This work is generally done with one team of oxen, the driver, and only one helper who follows the plow and sees that the plants are not bruised or injured. This second cultivation involves less work than the first because the corn is taller and stronger,



Fig. 27. Mouldboard plow.

and less care is needed in piling earth around the plants. An average of ten *cuartillos* of corn can be cultivated in this manner in two days.

[407] *Third Cultivation:* Twenty days later the third and final cultivation begins. This time the wooden plow is used with a wide yoke for the oxen who walk two rows apart. The plow is directed between the two rows of corn, and a board is placed in the plow so that the earth is turned on both sides, thereby piling up the soil on the two rows of corn at once. (See Fig. 27.) Only one team, one driver, and one helper are needed for the third cultivation and eight to ten *cuartillos* of corn can be done per day.

After the third cultivation the corn plants in the first and last two rows of the milpa are hilled by hand with the *coa*. This hilling also serves as a symbol that the cultivation is over and is looked upon as a decoration or adornment of the work of